

**PATENT**  
**IBM Docket No. GB9-2000-0073US1**

**Listing of Claims (including status and amendments):**

1 1. (Currently amended) A graphical user interface system for  
2 displaying a plurality of icons to a selected user viewpoint,  
3 said system further comprising:

4 means for depicting a desktop which conceptually provides a  
5 three-dimensional smooth, rounded surface for said icons, in  
6 which said three dimensional surface is represented on a two-  
7 dimensional display device with the icons being oriented to be  
8 facing the user viewpoint irrespective of position on the  
9 surface, said means for depicting including means for calculating  
10 a viewing distance for each of said plurality of icons based on  
11 an apparent distance considering the location of the icon on the  
12 three-dimensional surface, and means for scaling, without  
13 distortion, the size of each of said plurality of icons by said  
14 relevant viewing distance with those icons on portions of the  
15 surface facing away from the desktop not being displayed; and

16 means for supporting navigation of said desktop by  
17 simulating a rotation of the desktop in three-dimensional space  
18 with the size and location of the icons corresponding to their  
19 respective positions on the surface.

20  
1 2. (Canceled) A graphical user interface system as claimed in

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2 claim 1, in which the desktop is viewed at an apparent distance  
3 from [a] the user viewpoint and said means for depicting  
4 includes:

5 means for calculating a viewing distance for each of said  
6 plurality of icons based on the apparent distance and the  
7 location of the icon on the three-dimensional surface, and

8 means for scaling, without distortion, the size of each of  
9 said plurality of icons by said relevant viewing distance with  
10 those icons on portions of the surface facing away from the  
11 desktop not being displayed.

1 3. (Currently amended) A graphical user interface system as  
2 claimed in claim [[2]] 1, further comprising:

3 means for changing the apparent distance between the  
4 viewpoint and the desktop.

1 4. (Original) A graphical user interface system as claimed in  
2 claim 1, further comprising:

3 an array for storing the position of each of said plurality  
4 of icons, in which the position is stored as a two-dimensional  
5 co-ordinate relative to the display device.

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1 5. (Original) A graphical user interface system as claimed in  
2 claim 4, in which the means for supporting navigation comprises:

3 means for determining a new two-dimensional co-ordinate for  
4 each of said plurality of icons following rotation of the  
5 desktop, and

6 means for updating the array accordingly.

1 6. (Original) A graphical user interface system as claimed in  
2 claim 5, in which said means for determining further comprises:

3 means for transforming the two-dimensional co-ordinate of  
4 each of said plurality of icons into a three-dimensional co-  
5 ordinate;

6 means for changing the three-dimensional co-ordinates based  
7 on the rotation of the desktop, and

8 means for transforming the changed three-dimensional co-  
9 ordinates into a new two dimensional co-ordinate for each of said  
10 plurality of icons.

1 7. (Previously amended) A graphical user interface system as  
2 claimed in claim 1, in which an icon is initially added to the  
3 center of the desktop by default.

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1 8. (Original) A graphical user interface system as claimed in  
2 claim 1, in which said means for supporting navigation is  
3 responsive to dragging the desktop with a pointing device in  
4 order to rotate the desktop.

1 9. (Original) A graphical user interface system as claimed in  
2 claim 1, in which said means for supporting navigation is  
3 responsive to dragging an icon beyond the desktop with a pointing  
4 device in order to rotate the desktop.

1 10. (Original) A graphical user interface system as claimed in  
2 claim 1, in which said plurality of icons are grouped  
3 automatically according to pre-determined criteria.

1 11. (Original) A graphical user interface system as claimed in  
2 claim 1, in which said three-dimensional surface is spherical.

1 12. (Currently amended) A computer program product for  
2 displaying a plurality of icons from a user viewpoint, said  
3 computer program product comprising computer program instructions  
4 on a computer readable medium, said instructions causing the  
5 computer to perform the steps of:

6 depicting a desktop which conceptually provides a smooth,  
7 rounded three-dimensional surface for said icons, in which said

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8 three dimensional surface is represented on a two-dimensional  
9 display device, such depicting including  
10 calculating a viewing distance for each of said plurality of  
11 icons based on an apparent distance considering the location of  
12 the icon on the three-dimensional surface, and  
13 scaling each of said plurality of icons by said relevant  
14 viewing distance and arranging each of them in an orientation to  
15 face the user viewpoint irrespective of position on the surface;  
16 and

17 supporting navigation of said desktop by simulating a  
18 rotation of the desktop in three-dimensional space and  
19 representing the sizing and location of the icons respective of  
20 the user viewpoint with each icon being sized according to its  
21 apparent distance from the viewpoint.

1 13. (Canceled) A computer program product as claimed in  
2 claim 12, in which the desktop is viewed at an apparent distance  
3 from the user viewpoint and said step of depicting includes the  
4 steps of:

5 calculating a viewing distance for each of said plurality of  
6 icons based on the apparent distance and the location of the icon  
7 on the three-dimensional surface, and

8 scaling each of said plurality of icons by said relevant  
9 viewing distance and arranging each of them in an orientation to  
10 face the user viewpoint irrespective of position on the surface.

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1 14. (Original) A computer program product as claimed in claim 13,  
2 further comprising the step of:

3 changing the apparent distance between the viewpoint and the  
4 desktop.

1 15. (Original) A computer program product as claimed in  
2 claim 12, further comprising:

3 an array in memory for storing the position of each of said  
4 plurality of icons, in which the position is stored as a two-  
5 dimensional co-ordinate relative to the display device.

1 16. (Original) A computer program product as claimed in  
2 claim 15, in which the step of supporting navigation further  
3 comprises the steps of:

4 determining a new two-dimensional co-ordinate for each of said  
5 plurality of icons following rotation of the desktop, and

6 updating the array accordingly.

1 17. (Original) A computer program product as claimed in claim 16,  
2 in which the step of determining further comprise the steps of:

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3 transforming the two-dimensional co-ordinate of each of said  
4 plurality of icons into a three-dimensional co-ordinate;

5 changing the three-dimensional co-ordinates based on the  
6 rotation of the desktop, and  
7

8 transforming the changed three-dimensional co-ordinates into  
9 a new two-dimensional co-ordinate for each of said plurality of  
10 icons.

1 18. (Original) A computer program product as claimed in claim 12,  
2 in which an icon is initially added to the center of the desktop  
3 by default.

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1 19. (Original) A computer program product as claimed in claim 12,  
2 in which said step of supporting navigation is responsive to  
3 dragging the desktop with a pointing device in order to rotate  
4 the desktop.

1 20. (Original) A computer program product as claimed in claim 12,  
2 in which said step of supporting navigation is responsive to  
3 dragging an icon beyond the desktop with a pointing device in  
4 order to rotate the desktop.

1 21. (Original) A computer program product as claimed in claim 12,  
2 in which said plurality of icons are grouped automatically  
3 according to pre-determined criteria.

1 22. (Previously amended) A computer program product as claimed in  
2 claim 12, in which said smooth, rounded three-dimensional surface  
3 is spherical.